

15 May 2007

Subject: Addendum No. 1 to the Plans and Specifications for the **Fuel Cell System.**

Notice is given that the revisions listed in the attached Addendum No. 1 are hereby made part of and incorporated into the Plans and Specifications for the **Fuel Cell System.**

This addendum should be acknowledged when your bid is submitted. Failure to acknowledge the Addendum may constitute grounds for rejection of the bid.

John Stufflebean
Director
Environmental Services Department

By: _____

Ting Ong, PE
Senior Engineer

Attachment

cc: Lee Price, City Clerk
Dori Guerreiro, Office of Equality Assurance

Addendum No. 1

Fuel Cell System

Specifications

1. **Specification Section 01010** – Add to paragraph 1.03 City Furnished Items and Services, new subparagraph C:
C. The City shall supply natural gas for use as a backup fuel for the FCS.
2. **Specification Section A1000** –
Replace paragraph 2.01 General Design Criteria, Subparagraph D, E, and G with the following:
 - A. The FCS shall be designed based on the use of digester gas as a fuel source, and natural gas as a backup. The FCS shall include a separate fuel conditioning system to clean and condition the digester gas to meet the guaranteed performance of the fuel cell system. The design of the gas conditioning system shall take into consideration the removal of hydrogen sulfide, saloxane, moisture, and non-desirable particulates present in the digester gas analysis.
 - B. The FCS shall have an efficiency of 47% based on 60% methane content. The Contractor shall provide an FCS with a guaranteed efficiency based on the characteristics of Owner-supplied gas.
 - G. The Contractor shall provide an FCS with guaranteed maximum emissions based on the quality of gas and water supplied by the City. The maximum emissions shall meet Bay Area Air Quality Management District requirements.

Replace paragraph 2.02 Electrical Design Criteria, Subparagraph D with the following:

- D. The FCS will have a three-phase output voltage of 480VAC at 60 Hz. The FCS will have a transformer to bring the voltage up to 4,160 VAC. The City will provide the connection to the WPCP electrical distribution system.

Plans

1. Replace Sheet 1 – Title, with Sheet 1 – Title, issued herewith.
2. Replace Sheet 2 – Site Plan, with Sheet 2 – Site Plan, issued herewith.
3. Replace Sheet 3 – Underground Facilities with Sheet 3 – Underground Facilities, issued herewith.
4. Add Sheet 4 - Soil Boring Data (for reference only)
5. Add Sheet 5 – Plant Layout and Grading Plan (for reference only)

Questions and Answers

1. **Question 1** - All contractors will require a gas analysis including all constituents and moisture content. Please provide all gas analyses that have been done in the past to avoid any delay in the bidding process.

Answer - Gas analyses for digester gas and natural gas are issued herewith, as reference only. See Specification Section A1000 - Fuel Cell System, Part 3, for contractor responsibility to analyze gas fuel for the purpose of designing the FCS.